



## Eastern Massasauga *Sistrurus catenatus*

The eastern massasauga rattlesnake has been listed as a threatened species under the Endangered Species Act. Threatened species are animals and plants that are likely to become endangered in the foreseeable future. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.

### What is an eastern massasauga rattlesnake?

**Appearance:** Massasaugas are small snakes with thick bodies, heart-shaped heads and vertical pupils. The average length of an adult is about 2 feet. Adult massasaugas are gray or light brown with large, light-edged chocolate brown blotches on the back and smaller blotches on the sides. Young snakes have the same markings, but are more vividly colored. Other snakes that look similar include the fox snake, milk snake and hognose snake.

**Habitat:** Massasaugas live in wet areas including wet prairies, marshes and low areas along rivers and lakes. In many areas massasaugas also use adjacent uplands during part of the year. They often hibernate in crayfish burrows but may also be found under logs and tree roots or in small mammal burrows. Unlike other rattlesnakes, massasaugas hibernate alone.



Photo courtesy of Dan Kennedy, Michigan DNR

**Reproduction:** Like all rattlesnakes, massasaugas bear live young. Depending on their health, adult females may bear young every year or every other year. When food is especially scarce they may only have young every three years. Most massasaugas mate in late summer, and give birth about a year later. Litter size varies from 5 to 20 young.

**Feeding Habits:** Massasaugas eat small rodents such as mice and voles but they sometimes eat frogs and other snakes. They hunt by sitting and waiting. Heat sensitive pits near the snakes' eyes alert the snake to the presence of prey. They can find their prey by sight, by feeling vibrations, by sensing heat given off by their prey, and by detecting chemicals given off by the animal (like odors).

**Range:** Eastern massasaugas live in an area that extends from central New York and southern Ontario to southcentral Illinois and eastern Iowa. Historically, the snake's range covered this

*Massasaugas are docile, secretive snakes that will try to escape rather than fight. But they will protect themselves and may bite if cornered. Be cautious in massasauga areas by wearing leather boots or shoes, watching where you place your hands and feet and walking around, rather than over, fallen logs. Treat massasaugas with respect, like any wild animal. If you are bitten by a massasauga, seek medical help immediately.*

same area, but within this large area the number of populations and numbers of snakes within populations have steadily shrunk. Generally, only small, isolated populations remain. The eastern massasauga is listed as endangered, threatened, or a species of concern in every state and province where it is found.

### **Why has the eastern massasauga been listed as a threatened species?**

**Eradication:** People seem to have an innate fear of snakes and fear of venomous snakes is particularly strong. Massasaugas are often killed when they show up near homes or businesses, and people may go out of their way to kill or even eliminate them. Indeed, many states had bounties on all rattlesnakes, including massasaugas.

**Habitat loss:** Massasaugas depend on wetlands for food and shelter and often use nearby upland areas during part of the year. Draining wetlands for farms, roads, homes, and urban expansion has eliminated much of the massasauga habitat. Also, massasaugas are not long distance travelers, so roads, towns, and farm fields prevent them from moving between the wetland and upland habitats they need. These same barriers also separate and isolate remaining populations from each other. Small, isolated populations often continue on a downward spiral until the massasauga is lost from those areas.

**Management:** Lack of management and improper timing of management are threats to

massasaugas. The snake's habitat needs vegetation control such as prescribed fire and mowing to prevent invasion of shrubs, trees and non-native plants. Woody plant invasion is reducing the amount of available habitat in some areas. Where land is managed to prevent woody invasion, snakes may be killed by prescribed fire and mowing when it happens after snakes emerge from hibernation.

### **What is being done to conserve the eastern massasauga?**

**Research:** Researchers are studying the eastern massasauga to learn about its life history, about how it uses its habitat, and how we can manage for it and its habitat.

**Habitat Management:** Many remaining populations of massasaugas are on public land and privately owned natural areas. Some land management practices on those properties harm massasaugas. The Service is working with willing land managers to practice techniques that allow traditional management goals to continue but avoid harming the massasauga and its habitat.

**Education:** Although many people have an innate fear of massasaugas, it is actually a secretive, docile snake that strikes humans only when it feels threatened and cornered. Living, working, or recreating in massasauga areas does require caution, but the massasauga is also an important and beautiful part of the natural heritage of those areas. We hope that

education about the docile nature of the snake, its habits, and its role in the ecosystem will help people feel more comfortable living with this rare creature.

### **Why do we want to conserve the eastern massasauga?**

**Ecosystem Role:** The massasauga plays an important role in its ecosystems, both as a predator on small mammals, other snakes, and amphibians and as prey for hawks, owls, cranes, and some mammals.

**Indicator Species:** The fact that massasaugas are in serious decline is a warning bell telling us that something is wrong. The story of the massasauga is similar to the story of many plants and animals that need wetlands or a combination of wetlands and uplands to survive. When we drain wetlands and develop in natural areas, we push our wild plants and animals onto ever smaller isolated islands of habitat where it is difficult for them to survive. By conserving massasaugas, we conserve natural systems that support many species of plants and animals.

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